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9/11 Search-and-Rescue Dogs Exhibit Few Effects from Exposure to Disaster Sites

By Greg Lester

The search-and-rescue dogs deployed following the September 11, 2001 terrorist attacks have not suffered either immediate or short-term effects from exposure to the disaster sites, researchers from Penn Veterinary Medicine report. The findings, presented in the September 15 issue of the *Journal of the American Veterinary Medical Association*, should help relieve fears about the after-effects of working at the 9/11 sites.

For the last three years, researchers at the School tracked the health of dogs and handlers from the World Trade Center, the Pentagon, and the Fresh Kills Landfill site on Staten Island, where debris from the World Trade Center was further searched.

"Overall, the lack of clear adverse medical or behavioral effects among the 9/11 dogs is heartening, both for the animals and the human rescue workers," said lead researcher **Dr. Cynthia M. Otto**, associate professor of critical care. "Since dogs age more rapidly than humans, they can serve as sentinels for human disease. We are encouraged that we do not see significant increases in cancer and respiratory diseases."

Researchers compared the dogs to a control group of search-and-rescue dogs that were trained similarly but not deployed.

Although there is no single registry of all dogs deployed to search the 9/11 sites, Penn researchers identified 212 deployed handlers,

and 97 consented to participate.

Despite rumors of numerous deaths of 9/11 search-and-rescue dogs, only one was confirmed to have died during the search period. In addition, the study was able to demonstrate that the injuries and ill effects of the search itself were minor. After the first year of



Dr. Otto examining a dog in distress.

surveillance, of the 97 deployed dogs enrolled in the study, only one died. During the past three years, 15 deployed dogs have died, of which eight had cancer. Currently, neither the death rate nor the cancer rate is different from that of the control group.

"Given the mature age of these dogs and their expected lifespan, the few deaths that did occur were not statistically significant," Otto said. "We can say that these findings preclude illness later in life, but it is clear that we don't see any trends in the current physical or behavioral well-being of these dogs that would be cause for alarm."

Initially, blood tests showed that the deployed dogs exhibited higher bilirubin concentration and alkaline phosphatase activity, which indicate that their livers were actively filtering toxins from their bloodstream. The serum globulins were also higher in the first year in deployed dogs, suggesting activation of the immune system. As the study progressed, however, these numbers came down to close to those of the dogs in the control group. "Early on, it was clear that these dogs were dealing with some stress from toxins. Although we don't currently have evidence of adverse effects, continued surveillance is still warranted," Otto said.

Since there was a concern about airborne pollutants, such as asbestos, Otto and her colleagues also examined x-rays taken of the dogs.

The examinations showed no apparent lung abnormalities. While it usually takes humans at least 20 years to develop mesothelioma after asbestos exposure, the shorter lifespan of dogs often means a relatively shorter latency period for developing cancer.

To assess the psychological well-being of the dogs, their handlers completed questionnaires that focused on behavioral disorders, such as aggression or fearfulness, which may have arisen since 9/11. Here also, the deployed dogs seemed similar to those of the control group. An ongoing study led by Melissa Hunt of the Department of Psychology is looking at the long-term psychological consequences for the human handlers.

"Since this is the first major study on search-and-rescue dogs and their handlers, we hope this data can be used to establish a baseline for future studies," Otto said. "Not only will it help ensure the health and safety of search-and-rescue dogs, but it will also help anticipate human disease as well."

Support for the study came from the AKC Canine Health Foundation, the American Kennel Club, Ralston Purina Co., the Veterinary Pet Insurance Co., and the Geraldine R. Dodge Foundation. The study also includes researchers at Michigan State University and the Centers for Disease Control in Atlanta.

The AKC Canine Health Foundation and AKC Companion Animal Recovery have approved a new two-year grant, effective January 1, 2005, that will allow Dr. Otto to continue to study the health of dogs deployed on 9/11.

Pennsylvania Farm Show

The nation's largest farm show is held in Pennsylvania. It will be held January 8 to 15, 2005 in the State Farm Show Complex in Harrisburg. The School will have a booth in the exhibition area and also will offer programs in the Family Living Area in the complex.

The dates and topics are:

- January 11, 3:00 p.m. Public Health Issues Related to Domestic Pets, Dr. Gary Smith
- January 12, 6:00 p.m. Biosecurity at the Farm Level, Dr. Robert Munson
- January 13, 1:00 p.m. Biting the Hand That Feeds: Understanding Canine Aggression to Owners, Dr. Ilana Reisner
- January 14, 4:00 p.m. The *Salmonella* Situation, Cleanup, and Biosecurity at New Bolton Center, Dr. Helen Aceto
- January 15, 12:00 p.m. *Salmonella* and Food Safety, Dr. Eric Gingerich

Symposium for Dog Breeders

The School will host an all-day Breeders Symposium on campus sponsored by the American Kennel Club and the AKC Canine Health Foundation on January 29, 2005. Topics covered include the "ABC's of Breeding," presented in the keynote address by Claudia Orlandi, Ph.D. Penn faculty will speak about reproduction, genetics of cancer, inherited cardiac diseases, feeding dogs for health and longevity, and vaccination protocols.

Reservations and registrations for the event will be handled by the Canine Health Foundation. The complete program, cost, and other information will be on its website shortly at <www.akcchf.org>.